department of public utilities los alamos, nm

2005 drinking water quality report

Introduction

Each year we issue to our customers a Drinking Water Quality Report designed as an informational source about the water and services we deliver every day.

As one of our valued customers, we're pleased to present to you this year's Drinking Water Quality Report. As you will see on the following pages, our water is safe and met, or in most cases was better than federal and state requirements. If you have any questions about this report or concerns regarding the water utility, please contact Pete Padilla, Environmental Compliance Specialist with the Department of Public Utilities at (505) 662-8130.

Our constant goal is to provide you with a safe and dependable supply of drinking water.

Source Of Our Drinking Water

The water source for Los Alamos County is groundwater pumped by twelve wells, which tap the main aquifer under the Pajarito Plateau, part of the Santa Fe Formation.

Our system has wellhead protection in place and we treat the water with a disinfectant. We routinely monitor for constituents in your drinking water according to Federal and State laws. The table on the following page shows the results of our monitoring for the period of January 1st to December 31, 2005. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

For People With Special Conditions

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants, call the EPA Safe Drinking Water Hotline 800-426-4791, or visit www.epa.gov/safewater/.

Consumer Confidence Report: 2005 Drinking Water Quality Data

Detected Contaminant (Unit Measurement)	Violation Y/N	Range of Levels Detected	System Average	Date Tested	MCLG	MCL	Likely Source of Contamination
Inorganic Compounds							
Arsenic (ppb)	N	Non-detect - 6.0	4.0	2005	0[1]	10[1]	Natural deposits
Chromium (ppb)	N	5.0 - 6.0	5.33	2005	100	100	Natural deposits
Fluoride (ppm)	N	0.4 - 1.2	0.81	Daily	4	4	Natural deposits, fluoridation by County
Nitrate & Nitrite (ppm)	N	0.32 - 0.45	0.38	2005	10	10	Leaching septic tanks, sewage; natural deposits
Lead (residential taps) (ppb)	N	<5.0	100%<detection limit 5 ppb	2005	0	AL=15[2]	Corrosion of household plumbing
Copper (residential taps) (ppm)	N	<0.05 - 0.14	94%<detection limit 0.09 ppm	2005	0	AL=1.3[2]	Corrosion of household plumbing
Hardness (as $CaCO_3$) (grains/gal)	N	1.66 - 5.34	3.34	8/21/03	-	-	Natural deposits
Disinfection By-Products							
Total Trihalomethanes (TTHMs)[3] (ppb)	N	0.1 - 14.5	4.77	2005	0	80	By-product of drinking water chlorination
Radionuclides							
Alpha emitters (pCi/L)	N	0.4 - 1.0	0.61	12/7/04	0	15	Erosion of natural deposits
Beta/photon emitters (pCi/L)[4]	N	1.9 - 4.5	3.05	12/07/04	0	50	Decay of natural and man-made deposits-
Microbiology							
Total Coliform (cfu per 100mL)[5]	N	Monthly Samples max. positive 1 of 49 (2%) min. positive 0 of 44 (0%)	Total positive samples 2004: 1 of 552	Monthly	0	5%	Naturally present in the environment

[1]These arsenic values became effective January 23, 2006. Data reported in the table is from 2005. The MCL in 2005 was at 50 ppb. There is no MCLG for arsenic.
[2]The Action Level (AL) for lead/copper is exceeded if 90% of homes tested have lead levels above 15 ppb and copper levels above 1.3 ppm. Samples are collected every three years. No lead/copper samples collected in 2005 exceeded the AL.
[3]TTHM compliance is based on a running annual average. TTHM concentrations vary seasonally in our water.
[4]Note: the MCL for Beta particles is 4 mrems/year. EPA considers 50 pCi/L to be a level of concern for beta particles.
[5]The MCL for total coliforms is the presence of coliform bacteria in 5% or more of the monthly samples.

How To Read This Table

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

- *ppm = Parts per million or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in $10,000.
- *ppb = Parts per billion or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- *pCi/L = Picocuries per liter* - picocuries per liter is a measure of the radioactivity in water.
- *MCL = Maximum Contaminant Level* - The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- *MCLG = Maximum Contaminant Level Goal* - The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- *Range of Levels Detected* = The minimum to maximum test results observed in 2005.

quality!

What Does This Mean?

As you can see by the table to the left, our system had no water quality standards violations. We're proud that your drinking water meets and in most cases is much better than Federal and State requirements. Although some contaminants are detected through monitoring and testing of the water supply, the EPA has determined that your water is safe at these low levels.

Arsenic

While your drinking water contains low levels of arsenic it does meet the current standard. The standard balances the current understanding of arsenic's possible health effects against the costs of its removal from drinking water. The EPA continues to research the health effects of low levels of arsenic. Arsenic is a mineral that at high concentrations is known to cause cancer in humans, and is linked to other health effects such as skin damage and circulatory problems.

Special Water Quality Monitoring

The EPA, under the Unregulated Contaminant Monitoring Rule, collected water samples from the Los Alamos County Water System for contaminants that are currently not listed as regulated. Based in part on this sampling EPA may decide to regulate one or more of these contaminants in the future to protect the public heath. All sample results were below the reporting limit (none detected).

Radon

We constantly monitor the water supply for various contaminants. In the year 2000 our water supply wells were tested for radon 222. Levels ranging from 235 to 685 pCi/L, with an average of 408 pCi/L were detected. There is no federal regulation for radon in drinking water. Radon may cause adverse health effects if inhaled over a long period of time. Radon in water may become airborne and contribute to a person's overall radon exposure.

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water (rivers and streams) throughout the United States. When ingested, cryptosporidium can result in diarrhea, fever, and other gastrointestinal symptoms. Los Alamos water is groundwater pumped through wells and does not come from rivers. As expected, cryptosporidium has not been detected in our water supply.

Source Water Assessment & Protection Program

Sources of Los Alamos' drinking water are generally protected from of contamination based on well construction, hydro geologic settings, and system operations and management. In 2003 the State of New Mexico Environment Department (NMED) performed a Source Water Assessment & Protection (SWAP) to identify possible sources of contamination. In 2004 NMED ranked the susceptibility of our entire water system as "moderately high." To discuss the findings of the SWAP report contact Pete Padilla, Environmental Compliance Specialist at (505) 662-8130.

Chromium

In December 2005, the Department of Energy (DOE) reported that it discovered elevated levels of chromium in some of its monitoring wells. Further groundwater sampling tests supported the December findings. These same data also show that drinking water supplied by Los Alamos County does not have elevated levels of chromium. EPA has set a Safe Drinking Water Act MCL of 100 ppb for chromium and NMED has set a groundwater protection standard of a maximum of 50 ppb. As reported in the CCR table on page 2, chromium levels in Los Alamos' drinking water range from 5 ppb to 6 ppb in 2005 and are far below the standards set by the EPA and NMED.

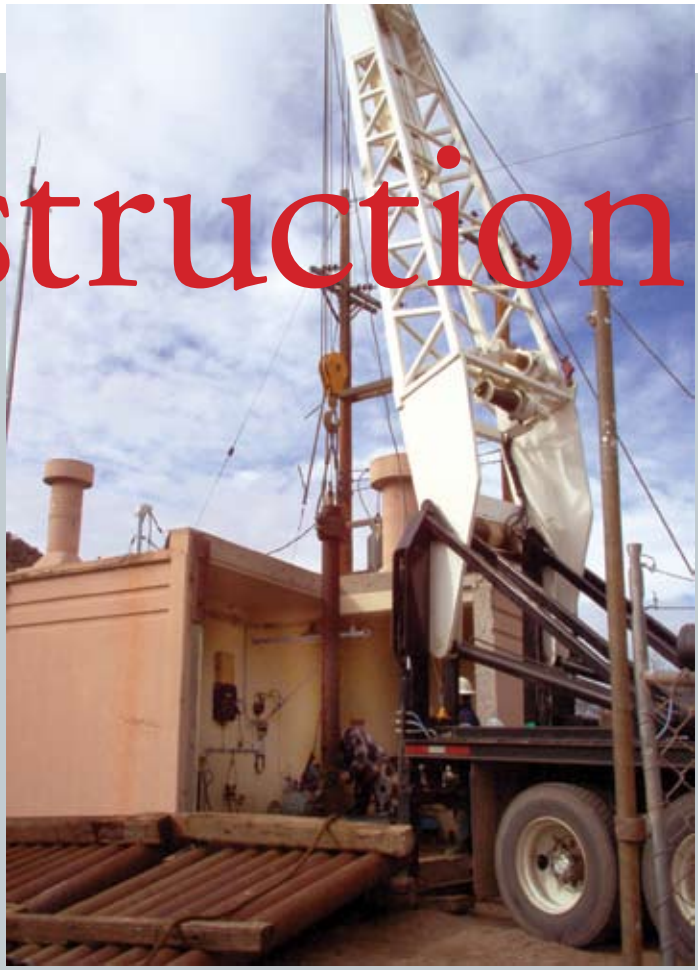
As a precautionary measure, the County and DOE will be testing for chromium more frequently in drinking water wells in the vicinity of the DOE monitoring wells that have shown elevated levels of chromium.

Perchlorate

Using the EPA-approved method for testing perchlorate, positive detections of around 4 ppb have been identified in Otowi Well No. 1. While this well meets all established state and federal drinking water standards, we currently only use it for non-potable purposes. The EPA has not adopted an MCL for perchlorate, but has established an official reference dose (RfD) of 0.0007 mg/kg/day of perchlorate ingested from all sources including drinking water, milk and food. If a persons total exposure to perchlorate came only from drinking water the equivalent dose would be about 24.5 ppb.

An RfD is a scientific estimate of daily exposure that is not expected to cause adverse health effects in humans. Some people who ingest perchlorate in excess amounts of the RfD may experience effects associated with hypothyroidism. Perchlorate interferes with the production of thyroid hormones, which are required for normal pre- and postnatal development in humans, as well as normal body metabolism. More information is available at www.epa.gov/fedfac/documents/perchlorate.htm.

construction



Guaje Well 1A

In January of 2005, Guaje Well No. 1A began to display signs of pump damage. The pump was removed from the well for inspection after which it was determined that a new pump was required. In addition to a new pump, several sections of water column pipe, shaft and bearings also had to be replaced *(see photo to the right)*. The fully rehabilitated well was returned to service in the spring of 2005.

SCADA Upgrade

The Supervisory Control And Data Acquisition (SCADA) System is the computerized control system for the water production operation. It became necessary to upgrade the servers for the SCADA system to improve reliability and maintainability. The installation and configuration was completed January 31, 2006.

Long Range Water Supply Plan

In April 2005 Daniel B. Stephens & Associates (DBS&A) was contracted to study the current and future water demands in Los Alamos. Included in the Study are an 1) examination of available resources; 2) estimation of the longevity of such resources to meet expected demands while minimally impacting the environment; and 3) potential susceptibility of the existing supply to contamination. Based on the findings, DBS&A will develop a 40-year water plan to address water service needs, balance the uses of water resources, and make recommendations on a water conservation program tailored to meet the specific needs in Los Alamos.

Two public meetings were held in October 2005 to gather input on a water conservation program appropriate to Los Alamos. DBS&A will complete the Plan in mid-2006.

Arizona Avenue Water Transmission Line Replacement

To improve the reliability of the Arizona Water Tank service area a 50-year old water transmission line was replaced in the summer of 2005.

The 12-inch water line was replaced from Diamond (just north of Urban) to North Road. An 8-inch water line was also replaced at the North Road/Arkansas bend in front of the Canyon Glen entrance.

utilities board

You Are Invited

The Department of Public Utilities is governed by the Los Alamos County Utilities Board. The Board encourages public interest and participation in decisions affecting drinking water. Regular Board meetings are held on the third Wednesday of each month at 5:30 p.m. on the first floor of the County's Annex Building, located at 901 Trinity Drive.

The public is welcome.

Robert Gibson, Chair

D. Christopher Ortega, Vice Chair

Ralph Phelps

Felicia Orth

Thurman Talley

We're Proud To Serve You

We are the Water Production Division of the Department of Public Utilities for Los Alamos County and we thank you for allowing us to continue to provide your family with clean, quality water this past year and the years to come.

water production

Left to right back row: Joseph Montoya, Darryl Tabor, John Fesser, Tim Glasco, Wayne Witten. Left to right front row: Harold Sanchez, Ted Jaramillo, Daryl Hastings, Rick Herrera, and Julian Bonnell. Not pictured: Brian Montoya.

Department of Public Utilities
Los Alamos County
901 Trinity Drive
Los Alamos, NM 87544

PRSRT STD
U S POSTAGE
P A I D

As mandated by the Safe Drinking Water Act (SDWA),
this Consumer Confidence Report details our water sources, the results of our water tests, and other information.

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

2005 drinking water quality report